

GenCore version 4.5  
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OM protein - protein search, using sw model

Run on: August 28, 2002, 17:32:26 ; Search time 37.53 Seconds  
(without alignments)  
540.230 Million cell updates/sec

Title: US-09-502-984B-6

Perfect score: 1098

Sequence: 1 KFSKALALAAAGPEELICF.....AEPFGGFWMSAMSEPSILTR 211

Scoring table:

BLOSUM62  
Gapop 10.0 , Gapext 0.5

Searched: 283138 seqs, 96089334 residues

Total number of hits satisfying chosen parameters: 283138

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

1: pir1:\*  
2: pir2:\*  
3: pir3:\*  
4: pir4:\*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

#### SUMMARIES

Result No.	Score	Query Match	Length	DB ID	Description
1	1060	96.5	508	1	ZUHUR erythropoietin rec
2	877.5	79.9	507	1	A46713 erythropoietin rec
3	869.5	79.2	265	2	S14081 erythropoietin rec
4	869.5	79.2	507	1	A32385 erythropoietin rec
5	171	15.6	625	2	S35317 hematopoietic grow
6	164	14.9	626	2	S37622 proto-oncogene - m
7	146	13.3	579	2	B45266 MPL-K protein prec
8	146	13.3	635	2	A45266 MPL-K protein prec
9	118	10.7	581	2	I45971 prolactin receptor
10	111	10.1	522	2	B45268 interleukin-9 rece
11	110.5	10.1	634	2	S33339 somatotropin recep
12	107	9.7	608	2	S32823 somatotropin recep
13	104	9.5	616	2	A30304 prolactin receptor
14	103.5	9.4	677	2	S33608 somatotropin recep
15	103.5	9.4	831	2	UQ1655 prolactin receptor
16	103	9.4	638	2	S12136 somatotropin recep
17	99.5	9.1	638	2	B28176 somatotropin recep
18	98.5	9.0	830	2	I50455 prolactin receptor
19	98	8.9	897	1	A33255 cytokine receptor
20	96.5	8.8	378	2	A40266 interleukin-3 rece
21	94	8.6	468	2	A45268 interleukin-3 rece
22	92.5	8.4	279	2	B32985 somatotropin-bind
23	92.5	8.4	638	2	A33505 somatotropin recep
24	92	8.4	2594	2	A35774 kinase-related pro
25	91	8.3	292	2	I77525 prolactin receptor
26	91	8.3	303	2	I77524 prolactin receptor
27	91	8.3	608	2	I52269 prolactin receptor
28	89.5	8.2	467	2	I56896 gene gfi-2 protein
29	88	8.0	288	2	B59405 prolactin receptor

30	88	8.0	376	2	A59405 prolactin receptor
31	88	8.0	622	2	A40144 prolactin receptor
32	87.5	8.0	1825	2	C88400 protein H19M22.1-1
33	87.5	8.0	1825	2	T32828 hypothetical prote
34	87	7.9	910	2	A25884 prolactin receptor
35	87	7.9	412	2	A41070 prolactin receptor
36	87	7.9	610	2	A34631 prolactin receptor
37	87	7.9	610	2	A36116 prolactin receptor
38	86	7.8	61	2	I38208 erythropoietin rec
39	85.5	7.8	863	2	H87556 aminopeptidase N l
40	85	7.7	284	2	S27931 Env/v-mpl fusion p
41	84	7.7	486	1	K1BYHB hexokinase (EC 2.7
42	83.5	7.6	1097	2	S17308 leukemia inhibitor
43	83	7.6	976	2	A36355 protein-tyrosine k
44	82.5	7.5	378	2	AF3320 flavohemoprotein l
45	82	7.5	336	2	I4581 CD1.1 - mouse

#### ALIGNMENTS

RESULT 1  
ZUHUR  
C:Species: Homo sapiens (man)  
C:Date: 12-Feb-1993 #sequence.revision 05-Apr-1995 #extl.change 22-Jun-1999  
C:Accession: A43799; A60160; A49824; A53958; A55280; I52563  
R:Jones, S.S.; D'Andrea, A.D.; Haines, L.L.; Wong, G.G.  
Blood 76, 31-35, 1990  
A:Title: Human erythropoietin receptor: cloning, expression, and biologic characteriz  
A:Reference number: A43799; MUID:90304340  
A:Accession: A43799  
A:Molecule type: mRNA  
A:Residues: 1-508 <CON>  
A:Cross-references: GB:M60459; NID:9182244; PIDN:AAA52403.1; PID:9182245  
R:Winkelmann, J.C.; Penny, L.A.; Deaven, L.L.; Forget, B.G.; Jenkins, R.B.  
Blood 76, 24-30, 1990  
A:Title: The gene for the human erythropoietin receptor: analysis of the coding seque  
A:Reference number: A60160; MUID:90304334  
A:Accession: A60160  
A:Status: not compared with conceptual translation  
A:Molecule type: mRNA; DNA  
A:Residues: 1-101, 'R', 103-188, 'RP', 191-243, 'E', 245-508 <MIN>  
R:Noguchi, C.T.; Bae, K.S.; Chiu, K.; Wada, Y.; Schechter, A.N.; Hankins, W.D.  
Blood 78, 2548-2556, 1991  
A:Title: Cloning of the human erythropoietin receptor gene.  
A:Reference number: A49824; MUID:9239733  
A:Accession: A49824  
A:Molecule type: DNA  
A:Residues: 1-508 <NOG>  
A:Cross-references: GB:S45332; NID:9255496; PIDN:AA823271.1; PID:9255497  
A:Experimental source: Placenta  
A:Note: sequence extracted from NCBI backbone (NCBIN:113293, NCBIPI:113294)  
R:Ehrenman, K.; St. John, T.  
Exp. Hematol. 19, 973-977, 1991  
A:Title: The erythropoietin receptor gene: cloning and identification of multiple tra  
A:Reference number: A53958; MUID:91372559  
A:Accession: A53958  
A:Molecule type: mRNA  
A:Residues: 1-508 <EHR>  
R:Penny, L.A.; Forget, B.G.  
Genomics 11, 974-980, 1991  
A:Title: Genomic organization of the human erythropoietin receptor gene.  
A:Reference number: A55280; MUID:92147143  
A:Accession: A55280  
A:Molecule type: DNA  
A:Residues: 1-17, 381-387, 'LLEQQQDA', 391-395, 504-508 <PEN>  
A:Note: sequence modified after extraction from NCBI backbone  
A:Note: the authors translated the codon GAF for residue 31 as B  
R:Maouche, L.; Tournamille, C.; Hattab, C.; Boffa, G.; Carton, J.P.; Chretien, S.  
Blood 78, 2557-2563, 1991  
A:Title: Cloning of the gene encoding the human erythropoietin receptor.



C.Species: Mus musculus (house mouse)  
C.Date: 28-Sep-1990 #sequence\_revision 05-Apr-1995 #text\_change 22-Jun-1999  
C.Accession: A41666; A32385; S13249  
R:Hino, M.; Tojo, A.; Misawa, Y.; Morii, H.; Takaku, F.; Shibuya, M.  
Mol. Cell. Biol. 11, 5527-5533, 1991  
A.Title: Unregulated expression of the erythropoietin receptor gene caused by insertion  
A.Reference number: A41666; MUID:9201783Z  
Accession: A41666

A:Molecule type: mRNA  
A.Residues: 1-507 <HIN>  
A:Cross-references: GB:S59388; NID:g237036; PIDN:AAB20029.1; PID:g237037  
A:Experimental source: murine erythro leukemia (MEL) cell line F5-5  
R:D'Andrea, A.D.; Lodish, H.F.; Wong, G.G.  
Cell 57, 277-285, 1989  
A>Title: Expression cloning of the murine erythropoietin receptor.  
A.Reference number: A32385; MUID:89195238  
Accession: A32385

A:Molecule type: mRNA  
A.Residues: 1-507 <DNA>  
A:Cross-references: GB:U04843; NID:g193090; PIDN:AAA37571.1; PID:g309219  
R:Kumamotoch, S.; Ikawa, Y.; Todokoro, K.  
J. Mol. Biol. 216, 567-575, 1990  
A>Title: Characterization of murine erythropoietin receptor genes.  
A.Reference number: S13249; MUID:91080149  
Accession: S13249

A:Molecule type: DNA; mRNA  
A.Cross-references: EMBL:X53081; NID:g50861; PDB:CAA37248.1; PID:g50862  
A.Experimental source: murine erythro leukemia K-1 cells  
Genetics:

A:Introns: 39/1; 83/2; 142/1; 194/3; 246/1; 275/2; 304/3  
C:Superfamily: erythropoietin receptor; cytokine receptor homology  
E:Keywords: alternative splicing; cytokine receptor; glycoprotein; transmembrane protein  
F:1-24/DNA: signal sequence #status predicted <SIG>  
F:25-507/Product: erythropoietin receptor #status predicted <MAT>  
F:25-248/DNA: extracellular #status predicted <EXT>  
F:250-271/DNA: cytochrome receptor homology <CRS>  
F:272-507/DNA: intracellular #status predicted <INT>  
F:52-62, 90-106/Disulfide bonds: #status predicted  
F:75/Binding site: carbohydrate (asn) (covalent) #status predicted

Query Match      79.2%; Score 869.5; DB 1; Length 507;  
Best Local Similarity 77.7%; Pred. No. 1,7e+76;  
Matches 164; Conservative 22; Mismatches 24; Indels 1; Gaps 1;

OY 1 KFESKAALLAAAGPEELLCTFERLEDLVCFEEAASACVGPNFSFPOLDEBPMLICRL 60  
         | | | | | | | | | | | | | | | | | : ||||| | |  
Db 34 KFESKAALLAARGSEILLCTFORLEDLVCFWEBAASSGM -DFNFYSFYQLGEGSRKSLS 92

OY 61 HOAPARAKATFWGLPLPADTSSVPFLERLTAAAGAFRRIVIHINVLLDPAVLGA 120  
       | | | | | | | | | | | | | | | | | : ||||| | |  
Db 93 HOAPVRKSVRFWOSLPADPTSSFVPLELYQTENSGSPRYRIIITHINVLLDA PAGLA 152

OY 121 RLADEGGHVIRLMPPETPMTSHTRFELOISAGNACSQGVORVELLEGTCVCYNLRG 180  
        | | | | | | | | | | | | | | | | | : ||||| | |  
Db 153 RRAEGGHVVLRMLPRPCAMPPTHRTREVDVSAGNRAGGTORVEYLEBRETCSVNLRG 212

OY 181 TRITIAVARMAEPDSFGGFWSAMSEPVSILT 211  
         | | | | | | | | | | | | | | | | |  
Db 213 TRYTFAVRARMAPDPFSGFWSAMSEPSALTT 243

RESULT 5  
S35317 hematoopoietic growth factor receptor precursor - mouse  
C:Species: Mus musculus (house mouse)  
C>Date: 13-Jan-1995 #sequence\_revision 13-Jan-1995 #text\_change 05-Nov-1999  
C:Accession: S35317; S35316  
R:Skoda, R.C.; Seidin, D.C.; Chiang, M.K.; Peichel, C.L.; Vogt, T.F.; Leder, P.  
EMBO J. 12, 2645-2653, 1993

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A:Title: MurineCmpl: a member of the hematopoietic growth factor receptor superfamily
A:Reference number: S35316, MUID:93327755
A:Accession: S35317
A:Molecule type: mRNA
A:Residues: 1-625 <SKO>
A:Cross-references: EMBL:Z22649; NID:g94725; PIDN:CAA80365.1; PID:g9394726
A:Accession: S35316
A:Molecule type: DNA
A:Residues: 1-70 <SKM>
A:Cross-references: EMBL:Z22657
C:Keywords: alternative splicing; cytokine receptor; glycoprotein; transmembrane prot
F:1-75/Domain: signal sequence #status predicted <SIG>
F:26-625/Product: hematopoietic growth factor receptor #status predicted <MAT>
F:26-482/Domain: extracellular #status predicted <EXT>
F:261-265/Region: WGXWS motif
F:465-469/Region: WSXWS motif
F:483-504/Domain: transmembrane #status predicted <TM>
F:505-625/Domain: intracellular #status predicted <INT>
F:113,117,178,349/Binding site: carbohydrate (asn) (covalent) #status predicted

Query Match          15.6%; Score 171; DB 2; Length 625;
Best Local Similarity 24.6%; Pred. No. 1.6e-08;
Matches 62; Conservative 33; Mismatches 105; Indels 52; Gaps 8;

OY  4 SKAALLARGEELLCTERLEDLVCFEEAASAGVPGNFSFQLEDEPMKLCRLHOA 63
    | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB  25 SODVFLALGTEPLNCFQTFEDLTCEWDEEAA--PSGTYYQLLYAVRGKPRACPLYSQ 82

OY  64 PTARCAITFMCSLPAD-TSSFVPLELRLTAAS-GARFPHVHIINEVLLDAPVGLVAR 121
    | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB  83 SVPTFGTYYVCOFPADDEVRLFFPLHLWKNVSLNQTLLQRIQVDSVGLPAPRVITKAR 142

OY  122 LADESGHVIVM-LPPETPTMTHIRFELDI----SAGNGASVQVRELLEGRT----- 170
    | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB  143 GGSQGEIQLIHWEAPAP--ISDFLRHRLKRGPPDSSNAAPASV--IQLLSTECCTPLW 198

OY  171 -----ECVLSNLGRTTRITIAVARARMAEPSPFG 197
    | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB  199 MPNPVPVLDQPCVHPTRASQHPGAPFLTVKGSCIVSGIQAASKSYMQLQRSQDQGVSLR 258

OY  198 GFWMSMSEPSVL 209
    | | | | | | | |
DB  259 GSWGSPSPVTV 270

RESULT 6
S37622
Proto-oncogene - mouse
C:Species: Mus musculus (house mouse)
C:Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 05-Nov-1999
C:Accession: S37622
R:Vignon, I.; Florindo, C.; Fichelson, S.; Guenet, J.L.; Mattei, M.G.; Souyri, M.; Cos
Oncogene 8, 2607-2615, 1993
A:Title: Characterization of the murine Mpl proto-oncogene, a member of the hematopoi
A:Reference number: S37622; MUID:93390934
A:Accession: S37622
A:Status: preliminary
A:Molecule type: mRNA
A:Residues: 1-626 <VIG>
A:Cross-references: EMBL:X73677; NID:g404318; PIDN:CAA52031.1; PID:g404319

Query Match          14.9%; Score 164; DB 2; Length 626;
Best Local Similarity 23.5%; Pred. No. 7.6e-08;
Matches 61; Conservative 34; Mismatches 105; Indels 60; Gaps 8;

OY  4 SKAALLARGEELLCTERLEDLVCFEEAASAGVPGNFSFQLEDEPMKLCRLHOA 63
    | | | | | | | | | | | | | | | | | | | | | | | | | | | |
DB  18 SODVFLALGTEPLNCFQTFEDLTCEWDEEAA--PSGTYYQLLYAVRGKPRACPLYSQ 75

OY  64 PTARCAITFMCSLPT-ADTSSFVPLELRLTAAS-GARFPHRVHIINEVLLDAPVGLVAR 121

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A:Accession: A60380  
 A:Molecule type: protein  
 A:Residues: 41-58, 'X', 60-66; 90-93, 'X', 95-96, 'X', 98-103, 'X', 105, 'NX', 108; 150-164, 'XX', 167  
 A:Note: the amino end of the mature protein was blocked  
 C:Superfamily: cytokine receptor homology  
 C:Keywords: blocked amino end; glycoprotein; transmembrane protein  
 F:1-24/Domain: signal sequence #status predicted <Sig>  
 F:25-616/Product: prolactin receptor 2 #status predicted <MAT>  
 F:36-221/Domain: cytokine receptor homology <CRS>  
 F:235-258/Domain: transmembrane #status predicted <TM>  
 F:59,104,132,347,389,411/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 9.5%; Score 104; DB 2; Length 616;  
 Best Local Similarity 21.2%; Pred. No. 0.05;

Matches 46; Conservative 37; Mismatches 100; Indels 34; Gaps 10;

QY 5 KAALLAARGEELLCFERLEEDLVCFEEAASAGVCGNFSFQLEDEPMKLCRLHQAP 64  
 DB 30 KPIIFKCRSPER-----ETFTCMWRPGADGGL-PTNTLYTHKGE---TITHECP 76  
 QY 65 TARGAIFMCSLPTADSSFVPLELRLLTAAS-----GAPRFHRIHINEVLLDAPVGL 118  
 DB 77 DYTGPGNSCYFSKKTHTSWTIYIITVYATNMGSSVSDPRY--VDVTIVEPDPVNL 133  
 QY 119 ---VARLADESHVIRWLPPEPTPMTS--HIRELDISAGNGAGSVORVELLEGTEC 172  
 DB 134 TLEVKHEDRKPYLWMLPPTLVDVRSGLTLQYEIRLKEPKAA--EWETHFAGQOTOF 191  
 QY 173 VLSNLGRTRITIAVARARMAEPSPGFGWSAMSEPVSL 209  
 DB 192 KILSLYPGQKYLQVQRCK---PDH-GFWSVSWSPSSSI 224

# RESULT 14

S33608

somatotropin-binding protein, high molecular weight, precursor - mouse  
 N:Alternate names: growth hormone-binding protein, high molecular weight  
 C:Species: Mus musculus (house mouse)  
 C:Date: 19-Mar-1997 #sequence\_revision 19-Mar-1997 #text\_change 08-Dec-2000  
 C:Accession: S33608; S33607

R:Smith, W.C.; Kunjyosht, J.; Talamantes, F.  
 Mol. Endocrinol. 3, 984-990, 1989

A:Title: Mouse serum growth hormone (GH) binding protein has GH receptor extracellular

A:Reference number: S33607; MOID:89295449  
 A:Accession: S33608

A:Molecule type: mRNA

A:Residues: 1-677 <SMI>  
 A:Cross-references: EMBL:M3324; NID:g193508; PIDD:AAA37690.1; PID:g309253

A:Experimental source: liver  
 A:Accession: S33607

A:Molecule type: mRNA  
 A:Residues: 1-324 <SM2>

A:Cross-references: EMBL:M31680; NID:g193506; PIDD:AAA37689.1; PID:g309252  
 C:Superfamily: fibronectin type III repeat transmembrane protein

C:Keywords: glycoprotein; receptor; transmembrane protein  
 F:1-18/Domain: signal sequence #status predicted <Sig>

F:19-677/Product: somatotropin-binding protein, high molecular weight #status predicted  
 F:74-297/Domain: transmembrane #status predicted <TM>

F:40-164/Binding site: carbohydrate (Asn) (covalent) #status predicted  
 F:164,169/Binding site: carbohydrate (Asn) (covalent) #status predicted

Query Match 9.4%; Score 103.5; DB 2; Length 677;  
 Best Local Similarity 22.6%; Pred. No. 0.063;

Matches 51; Conservative 39; Mismatches 89; Indels 47; Gaps 10;

QY 14 PELLCEFERLEEDLVCFEEAASAGV-GPGNFSFQLED-----EPWKLCR 59  
 DB 51 PFTFKCRSPLEFTFCYWGNDPKTPGSIQLYAKRRSQARIAHEMTQEWKEC- 109  
 QY 60 LHQAPFARGAIRFWCSLPTADTSSFVPLELRLLTAASGAPRFHRIHINEVLLDAPVGL 119

DB 110 ----PDVSAKGNCSYFNSSYTSIMIPYCIKLT-TNGDLLDQCFYDEIVQDDPPICLN 164  
 QY 120 ARLADES-----GHVIRWLPPEPTP-MTSHIRELDISAGNGAGSVORVELLEGCR---- 169  
 DB 165 WTLNLISLFGIRGDIQYQSMQPPPNADVLKMKMILEYEI-----QYEVNESKKVM 215  
 QY 170 ----TECVLSNLGRTRITIAVARARMAEPSPGFGWSAMSEPVSL 210  
 DB 216 GPIWLTFCPVYSLRMKDEHEVRVRSR--QRSEFEKY-SEFSEVLKVI 258

# RESULT 15

JQ1655

prolactin receptor precursor - chicken

C:Species: Gallus gallus (chicken)

C:Date: 30-Sep-1993 #sequence\_revision 30-Sep-1993 #text\_change 28-Jul-2000

C:Accession: JQ1655

R:Tanaka, M.; Maeda, K.; Okubo, T.; Nakashima, K.

Biochem. Biophys. Res. Commun. 188, 490-496, 1992

A:Title: Double antenna structure of chicken prolactin receptor deduced from the cDNA

A:Reference number: JQ1655; MOID:93075121

A:Accession: JQ1655

A:Molecule type: mRNA

A:Residues: 1-831 <TM>

A:Cross-references: DDBJ:D13154; NID:g222848; PIDD:BAA02439.1; PID:g222849

A:Experimental source: kidney

C:Superfamily: cytokine receptor homology

C:Keywords: glycoprotein; transmembrane protein

F:1-23/Domain: signal sequence #status predicted <Sig>

F:24-831/Product: prolactin receptor #status predicted <MAT>

F:36-219/Domain: cytokine receptor homology <CRS>

F:239-425/Domain: cytokine receptor homology <CRS>

F:439-462/Domain: transmembrane #status predicted <TM>

F:59,91,100,112,132,262,303,315,335,647,701,800/Binding site: carbohydrate (Asn) (cov

Query Match 9.4%; Score 103.5; DB 2; Length 831;  
 Best Local Similarity 20.0%; Pred. No. 0.082;

Matches 42; Conservative 37; Mismatches 102; Indels 29; Gaps 8;

QY 5 KAALLAARGEELLCFERLEEDLVCFEEAASAGVCGNFSFQLEDEPMKLCRLHQAP 64  
 DB 233 KPIIFKCRSPER-----ETFTCMWRPGADGGL-HPTNTLYTHKGE---QYIECP 279  
 QY 65 TARGAIFMCSLPTADSSFVPLELRLLTAAS-----SGAPRFHRIHINEVLLDAPVGL 118  
 DB 280 DYTRAGNSCYFDPKHTSFWTIYIITVATNMGSSNSDPRY--VDVTIVQPDPPVNV 336  
 QY 119 VARL---ADSSGHVIRWLPPEPTPMTS-HIRELDISAGNGAGSVORVELLEGTECVL 174  
 DB 337 TLEIKRPINRKPVLVLTWSPPLADVRSGLTLEELRLKPEEGEWEITIFVGOQOTQYKM 396  
 QY 175 SNLGRTRITIAVARARMAEPSPGFGWSAMS 204  
 DB 397 FSLNPGKKYITIQHCK---PDHGSMSSEWS 423

Search completed: August 28, 2002, 17:32:27  
 Job time: 388 sec

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